

Figure 1A

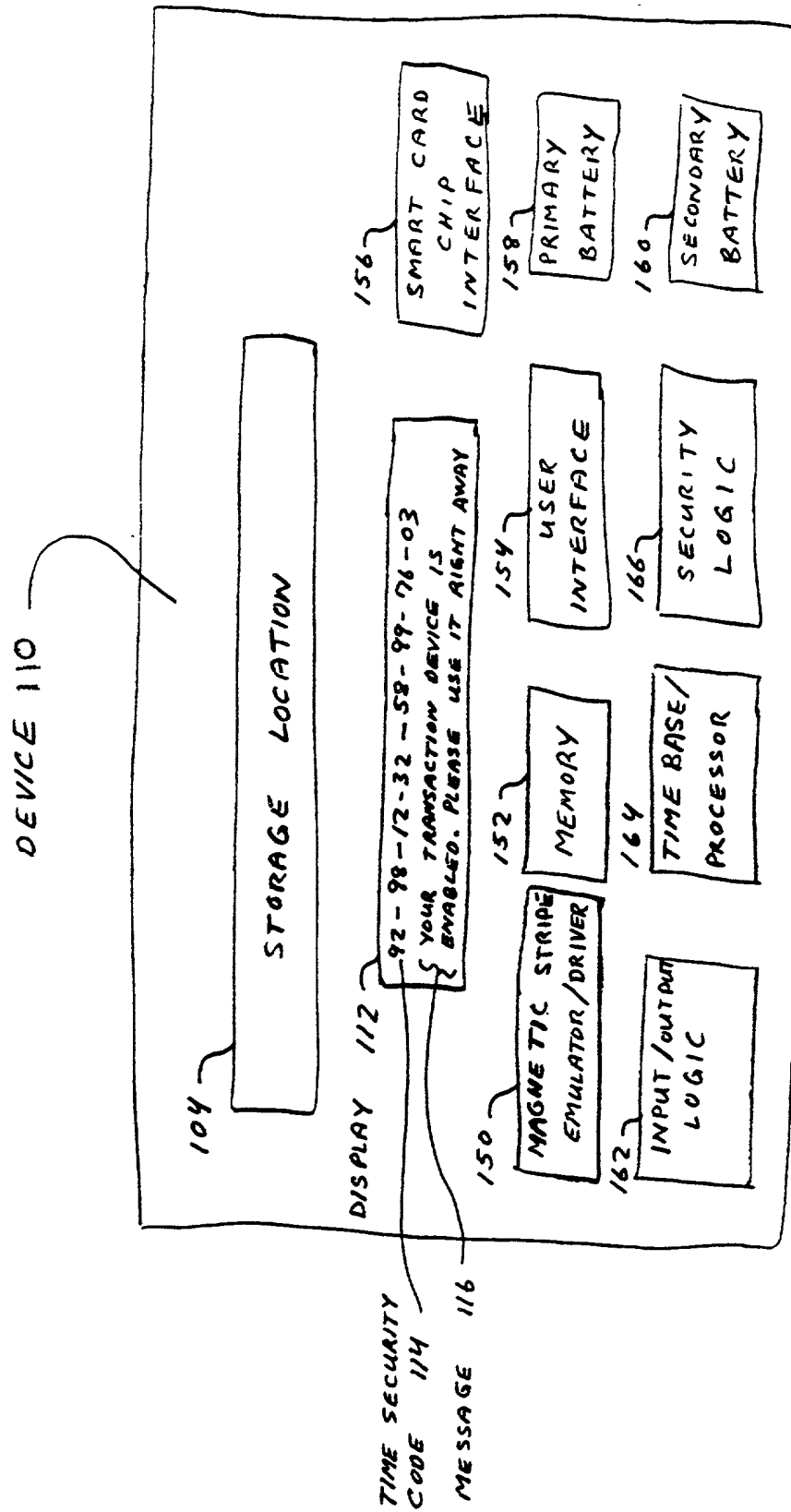
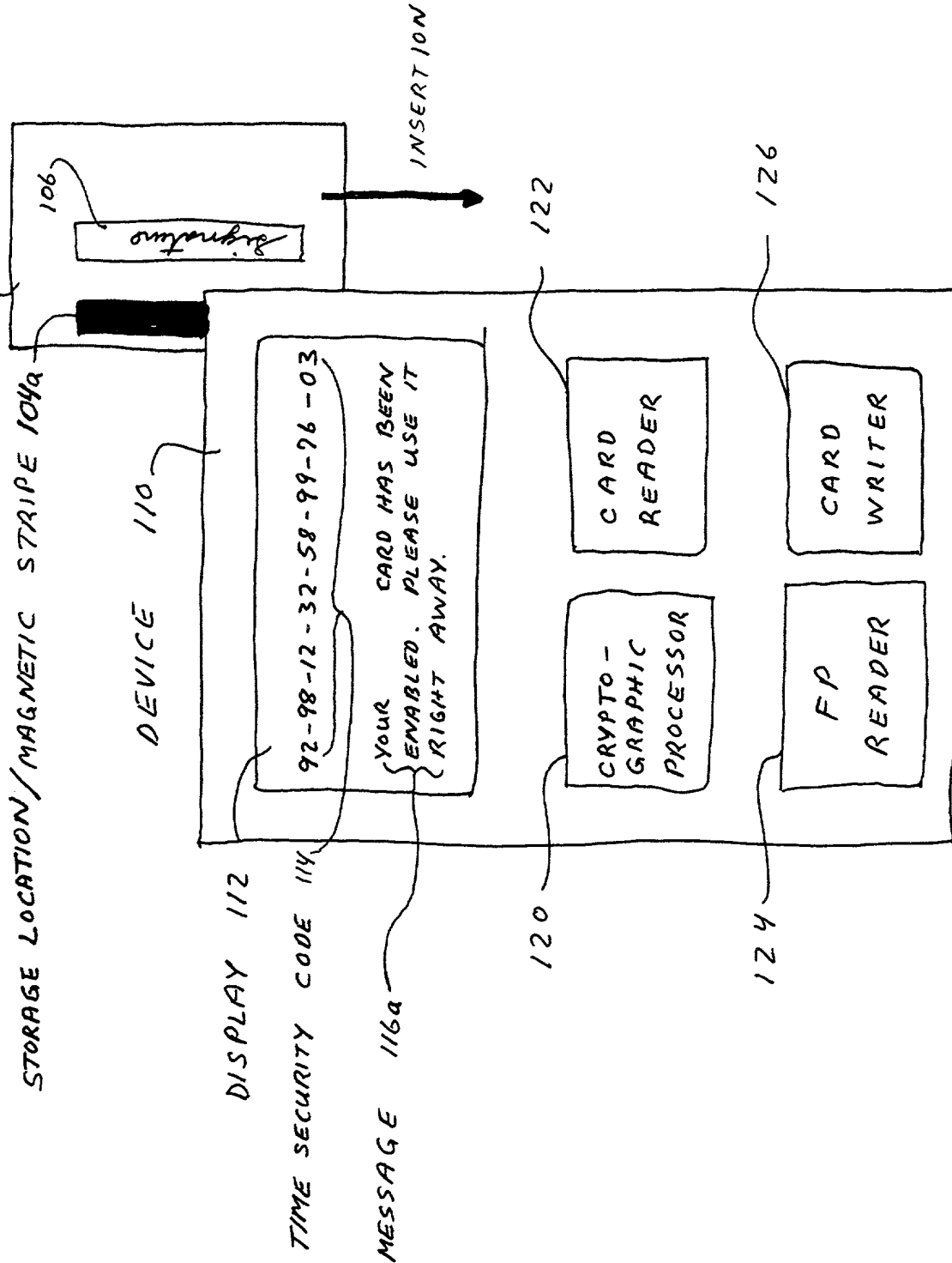


Figure 1B

FIG. 1B is a block diagram of a device 100 for processing a personal transaction card 102.

The device 100 includes a display 112, a time security code 114, a message 116a, a card reader 122, a card writer 126, a crypto-graphic processor 120, and a fingerprint reader 124.



## FIGURE 2

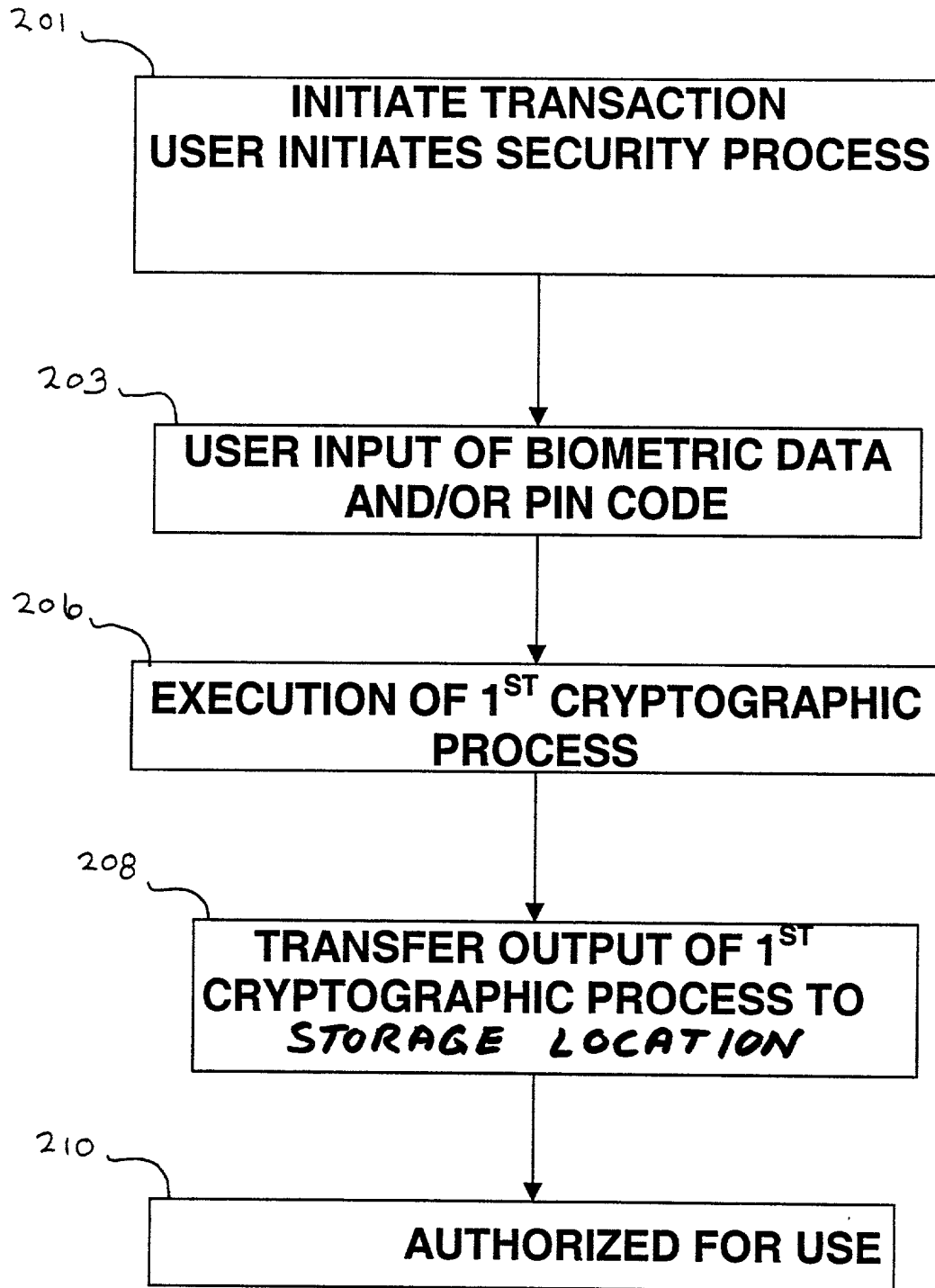


Figure 3 is a block diagram of a cryptographic processor system.

Figure 3

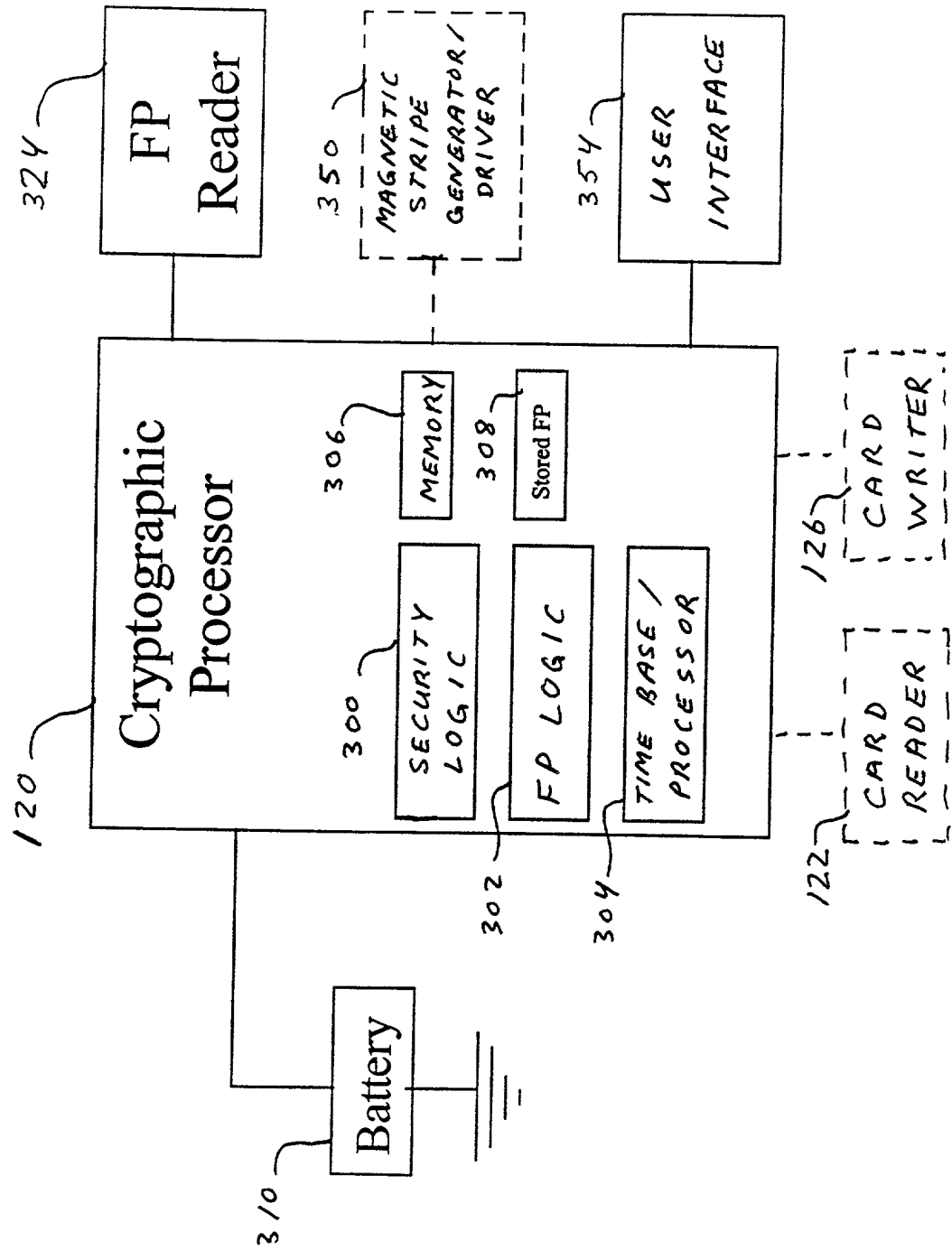


Figure 4A

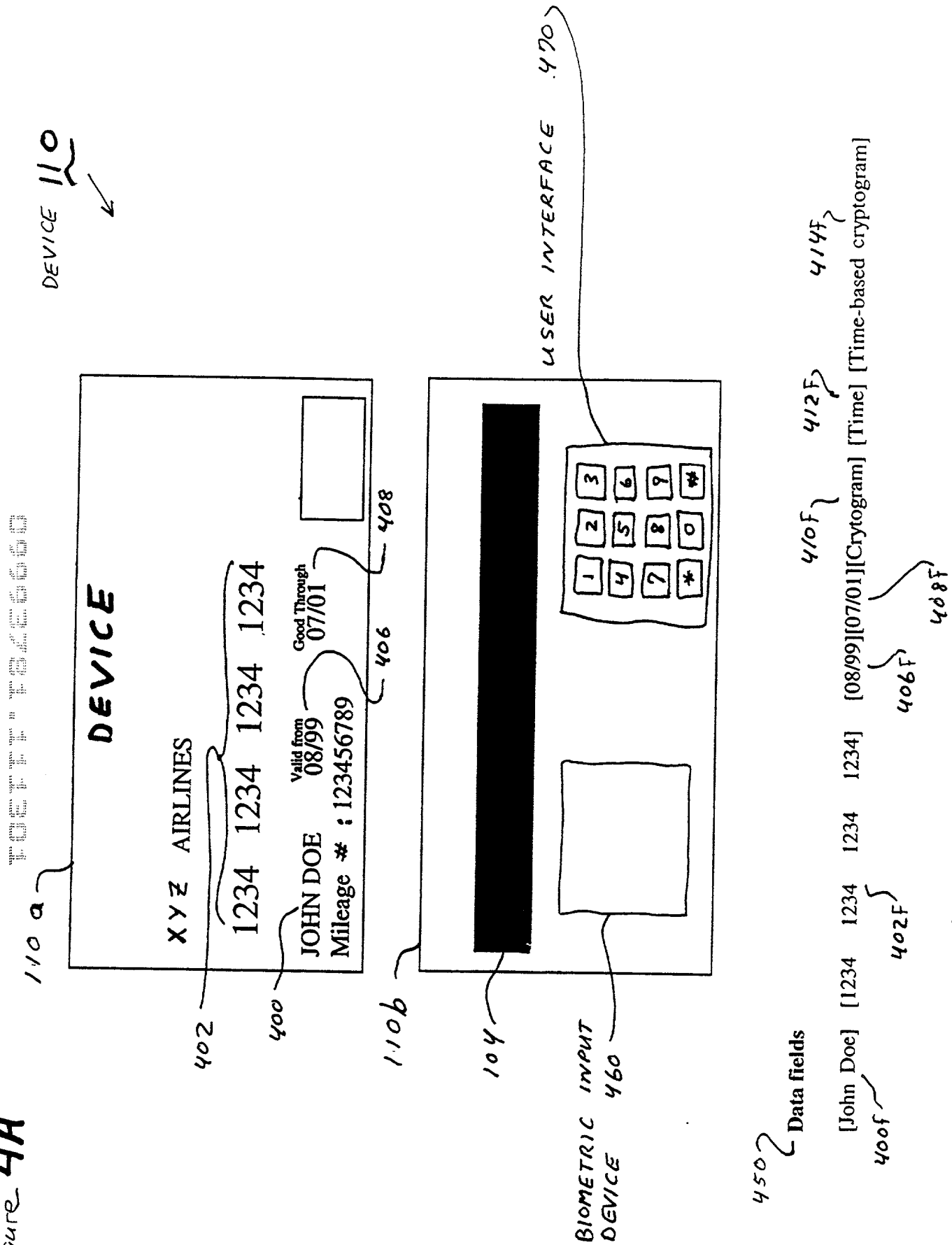
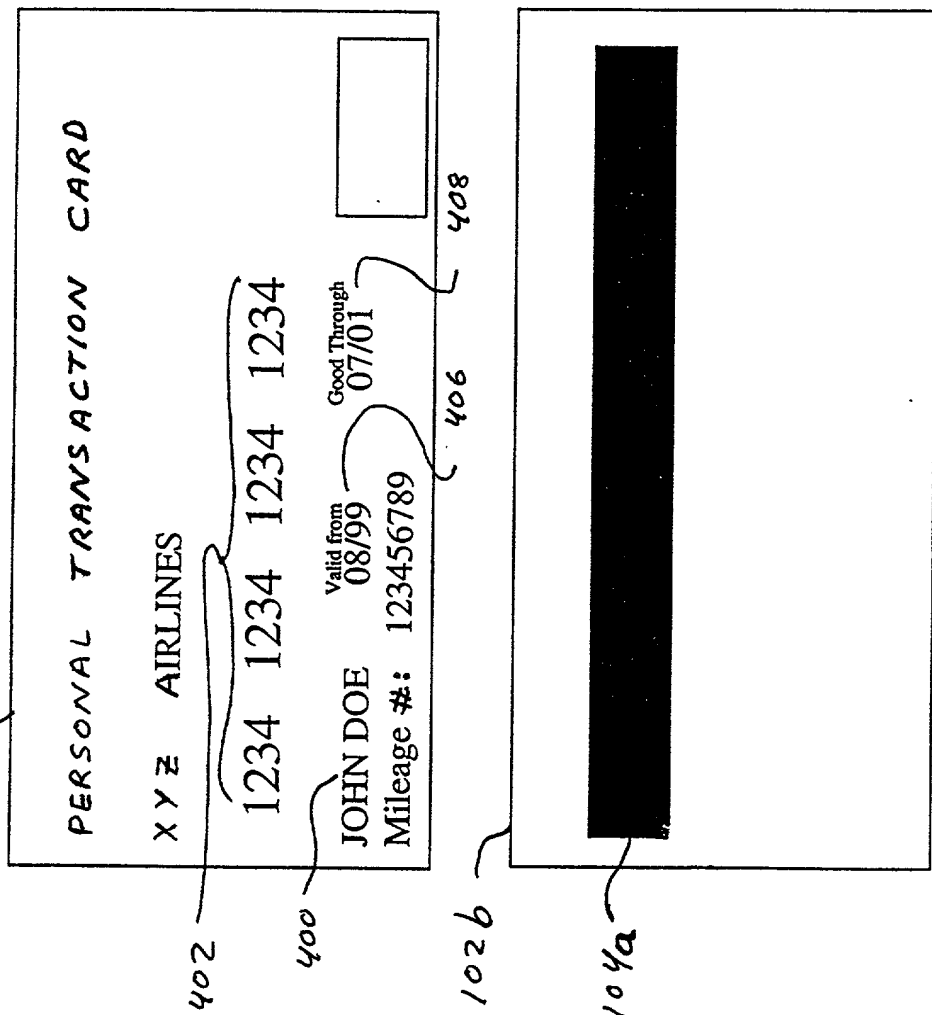


Figure 4B

102a PERSONAL TRANSACTION CARD 102



450 Data fields

[John Doe] [1234 1234 1234 1234] [08/99][07/01][Cryptogram] [Time] [Time-based cryptogram]

400f 402f 406f 408f 410f 412f 414f

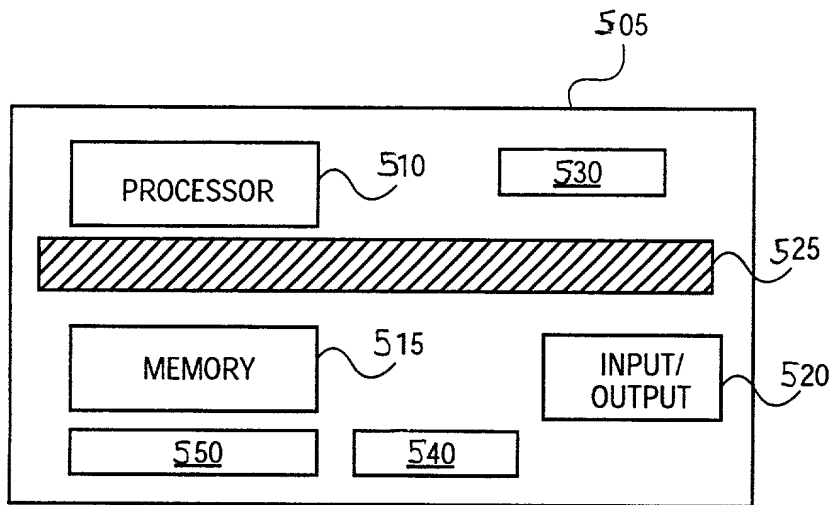


FIG. 5

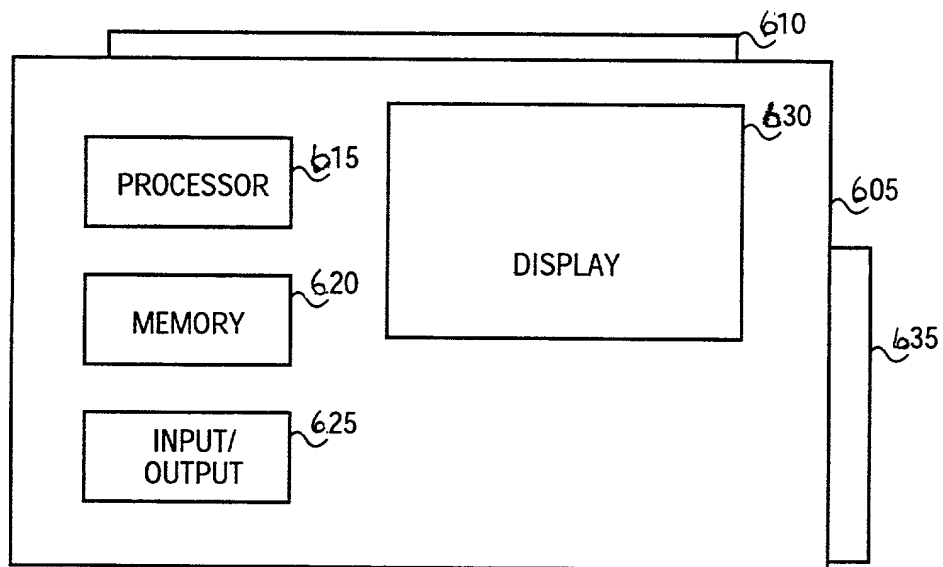
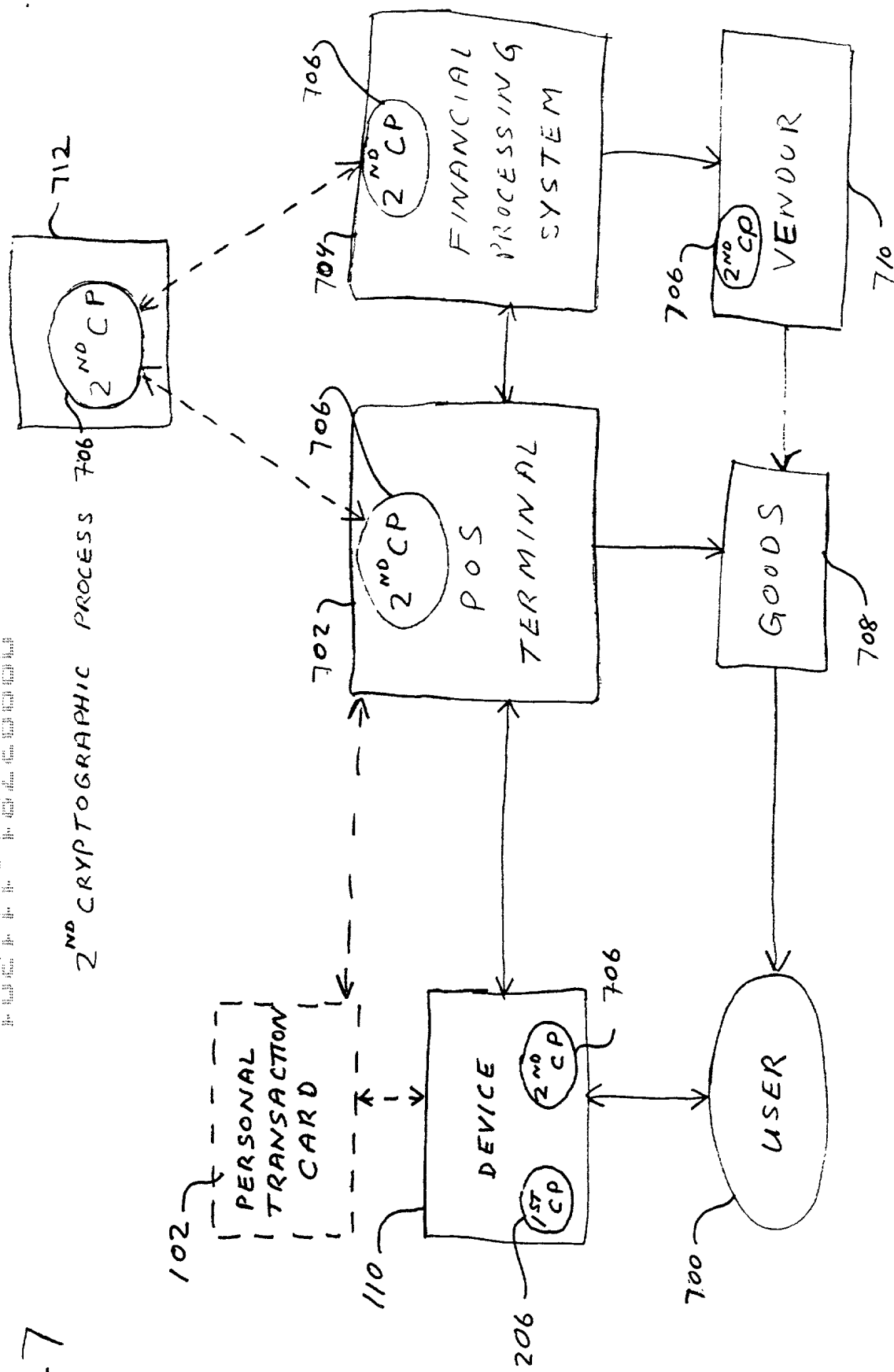


Figure 6

FIG. 7 is a block diagram of a system for a 2<sup>nd</sup> cryptographic process.

Figure 7





# FIGURE 8

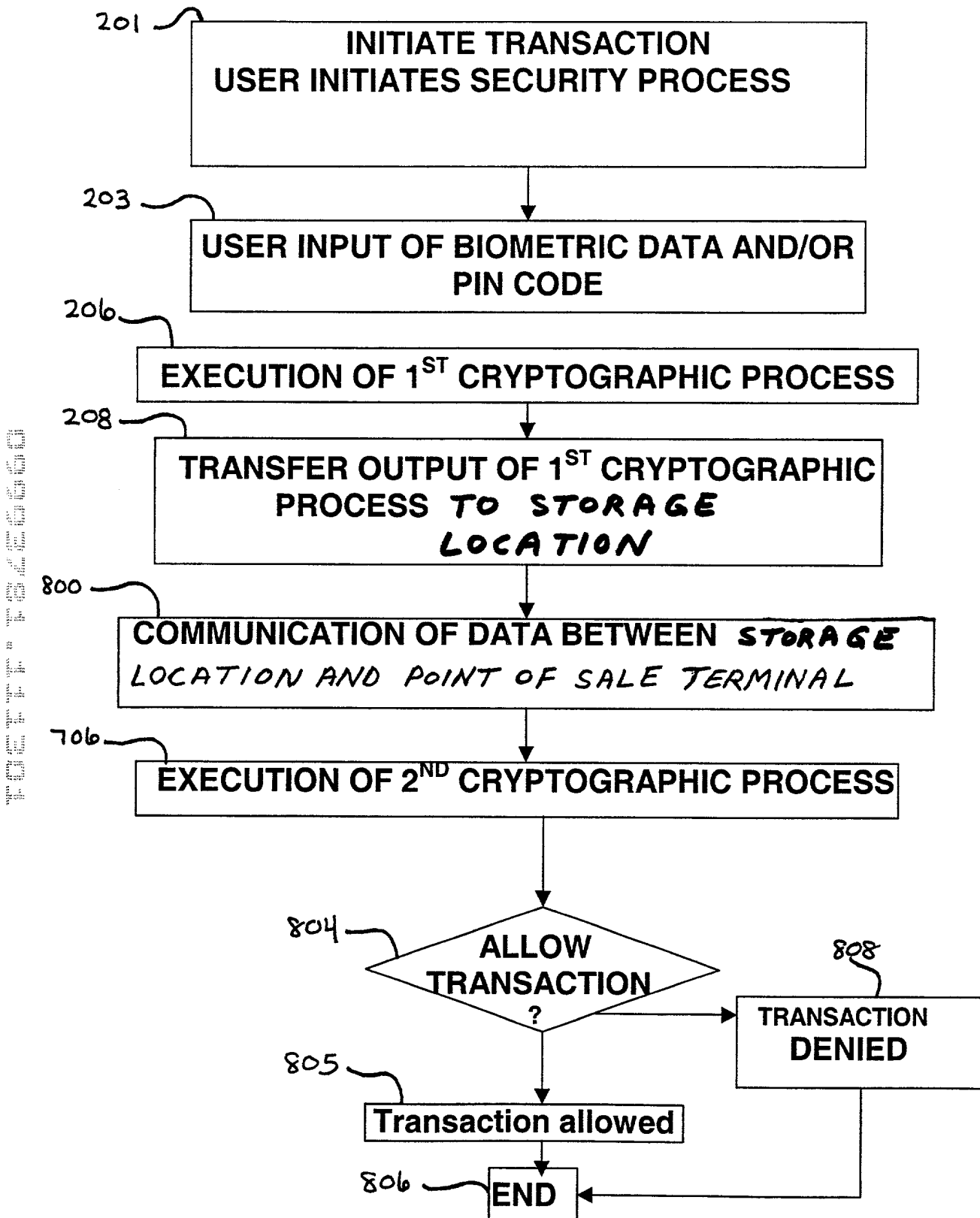
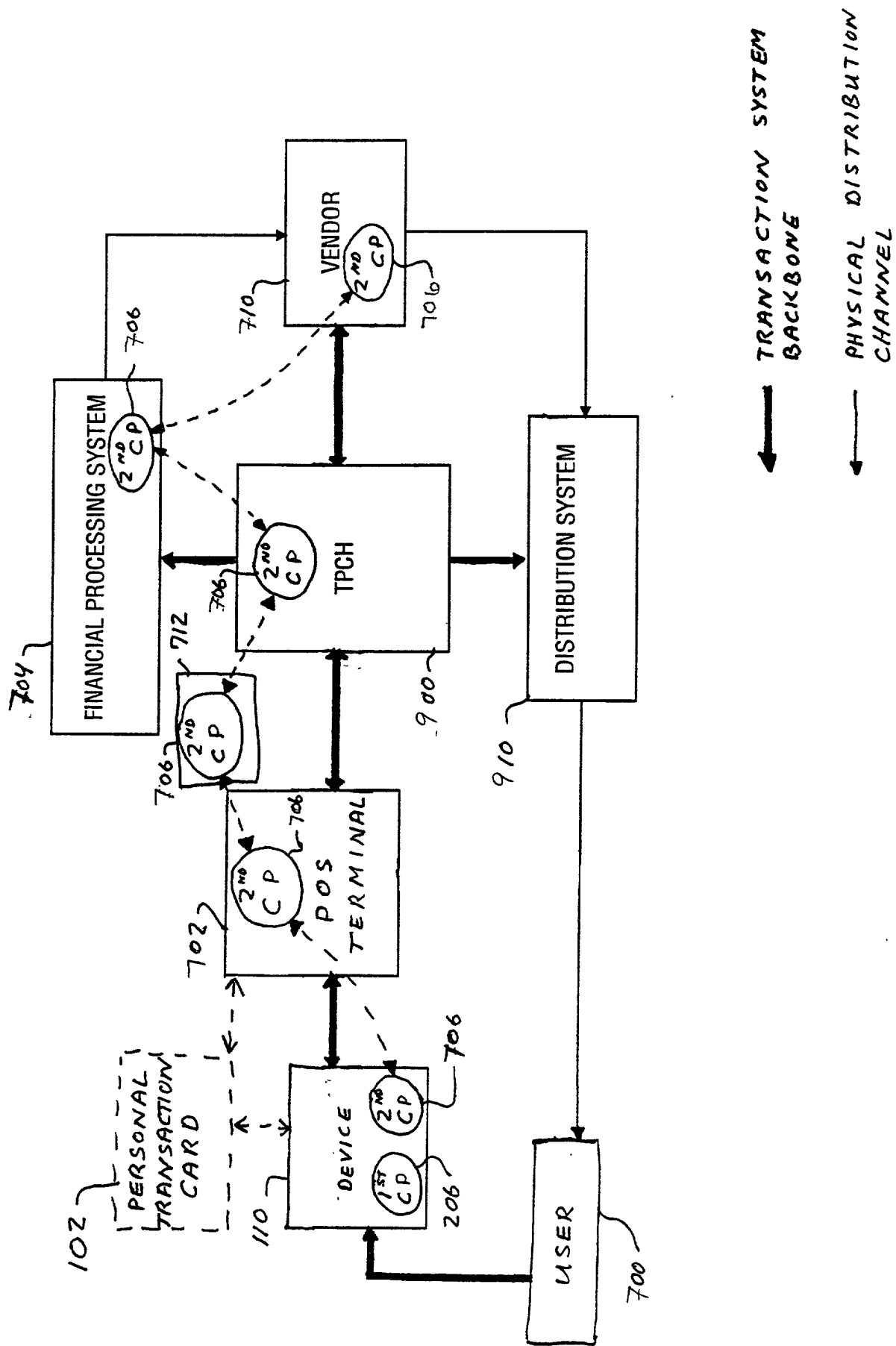


Figure 9



# Commerce General Architecture

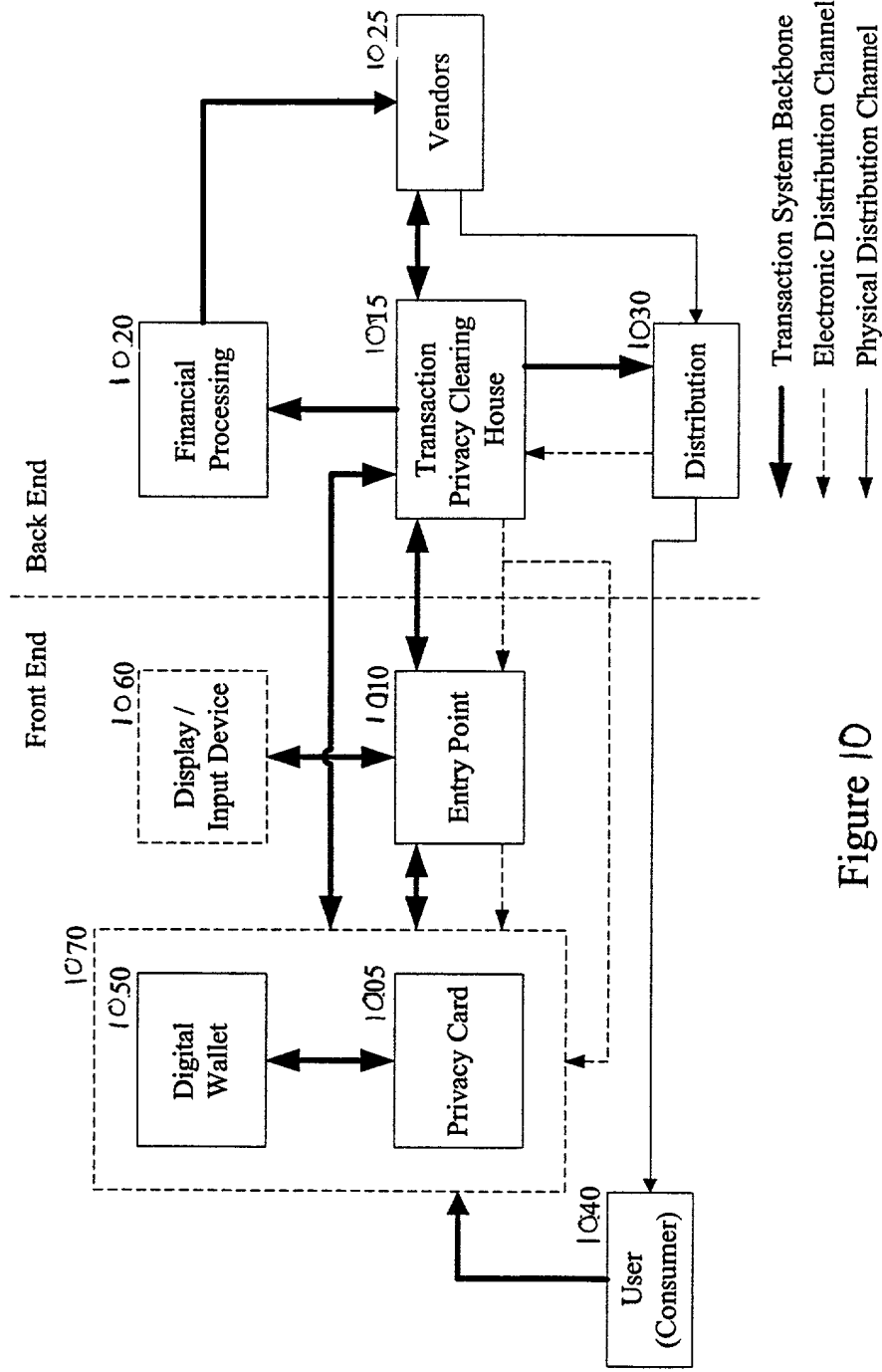


Figure 10